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INSTRUMENTAL DIAGNOSIS.

By Philip S. Wales, M. D.,

Of Philadelphia.

(*Continued from page* 169.)

III.—INSTRUMENTS REQUIRED IN THE PRACTICE OF LARYNGOSCOPY.

In laryngoscopy, as in rhinoscopy, we require throat mirrors, and an illuminating apparatus consisting of reflector and some form of lamp. The same optical principles are concerned in both. In order to get an image of the parts situated in the larynx, we have only to hold the small mirror in the back of the throat, with its face looking downward in the direction of the rays of light coming from those parts, which form the image seen by the observer. The optical law involved is, that the angle of incidence is equal to the angle of reflection; the luminous rays thrown by the reflector falling obliquely upon the throat mirror, as shown in Fig. 1, are reflected at an equal angle upon the larynx, which, after being thoroughly illuminated, reflects the light again upon the mirror, and exteriorly, exactly in the inverse direction to that by which it reached the larynx. The plane of the laryngeal aperture formed by the epiglottis in front, the arytenoid cartilages posteriorly, laterally by the ary-epiglottidean folds, is oblique from above downward, and from before backward. This position we have shown in the figure by the arrow, the point of which corresponds with the epiglottis; the left barb, as presented in the drawing, with the right vocal cord; the right with the left cord; and the left and right points of the feather respectively with the right and left arytenoid cartilages. By inspecting the figure, which also shows the plane of the mirror parallel with that of the laryngeal aperture, and above and behind it, we see that

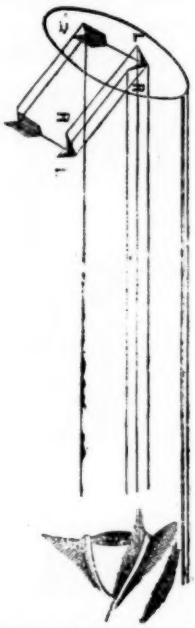

Fig. 1—Showing Lateral Inversion of Laryngeal Image.

the image, as far as regards the object, is perfectly symmetrical, and not inverted; but, as seen by the observer, its position has not this relation with the object, for the ray of light from the right barb of the lower arrow, corresponding with the right vocal cord marked R, impinges upon the left side of the mirror, marked L, and the ray from the left barb L represents the left cord upon the right side of the mirror, R. The same thing takes place as regards the feather points, so that when the rays reach the eye, after reflection,

the image has undergone a lateral inversion. This is the only alteration, for the image of the arrow is otherwise just as the object. In the laryngeal mirror, therefore, we will see the epiglottis situated in the subject above and in front of the laryngeal aperture, in its upper segment; the arytenoid cartilages placed behind this aperture, in its lower segment; the right vocal cord upon the left in the mirror, and the left cord upon the right. By inclining the mirror at various angles to the aperture, the image of the parts beneath it will also undergo corresponding inclination.

The throat mirror is usually made of glass, covered with amalgam and backed with German silver, thus making up a thickness of one-sixteenth of an inch, mounted upon a stem about four and a half inches long, fitting either movably or solidly, according to fancy, to a small delicate handle, two and a half inches

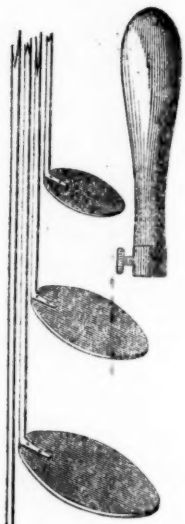

Fig. 2—Laryngeal Mirrors, (Posterior View).

long. They may be of most any shape, round, oval, elliptical, square, or variously truncated; but we always use and prefer the round mirror, and have several sizes always at hand, as shown in the annexed cut—which are respectively of one inch, seven-eighths, six-eighths, and four-eighths of an inch. Oval mirrors may be advantageously used when the throat is narrowed by swelling of the tonsils.

With respect to their attachment to the stem, an angular inclination of about 125° or 130° will be found to answer the best. We have already spoken on a previous page of the mirrors made of polished steel, and their disadvantage of having their reflecting surface easily marred by rust or scratches, an accident much more likely to occur in employing them for laryngoscopic purposes, on account of the frequent use made of metallic solutions. In those rare cases presented for infra-glottic exploration after tracheotomy, the superior reflecting surface of polished metal would, on account of the small size of the mirror required, be the best material from which to fabricate it.

Wertheim has suggested the employment of concave mirrors to magnify the parts inspected, but they have no practical advantage over the plain ones, as the magnifying power is small, and the difficulties of getting a correct image more difficult, to say nothing of their greater expense. As we have seen in the history of laryngoscopy that Warden employed reflecting prisms instead of plain mirrors, efforts have since been made in the same direction, but as yet no prismatic reflectors have been devised possessing the advantages and free from the objections of the round, plain mirror.

Reflector.—The same reflector used in rhinoscopy is required also in employing laryngeal mirrors. The remarks then made upon that subject may, *mutatis mutandis*, be also applied to laryngoscopy. We only described in that section the method to be pursued with those reflectors attached to the head, leaving for the present moment the description of those lamps with which a mirror is connected.

Those who are often called upon to make laryngeal explorations have, in their consulting rooms usually, some one of the special forms of illuminating apparatus, of which there are several. I can recommend from personal experience those of Tobold and Lewin as perhaps occupying the first place. The mirror may also be arranged in connection with an ordinary drop-light or gas burner, being in this case provided with a stand and Argand

burner. In situations where gas or the special lamps may not be obtainable, a very simple condenser may be had, consisting of a double convex lens, fitted to the side of a cylinder of tin, which may be used with any sort of lamp. To meet these emergencies, Dr. Oliver has recommended the lamp we have already shown in figure 10. With a like view, Dr. Mackenzie has invented two forms of concentrators, a larger and smaller one, which, consisting of a double convex lens, borne in the end of a short cylinder furnished with arms, can even be attached to a candle.

The illuminating apparatus of Dr. Tobold, as seen in the subjoined cut (Fig. 3), is much used by laryngoscopists. It is furnished by the shops of two sizes, the smaller one of which, connected with a study lamp, is shown; the larger one is habitually arranged with a drop-light, supplied with gas by an elastic tube attached to the chandelier or bracket. The principle of the apparatus is the same in both cases, there being a sufficient number of lenses in the tube, screwing on to the hood surrounding the chimney of the lamp, to render the light issuing therefrom parallel. This is effected by three double convex lenses of three inches focus; a pair of them is placed at the juncture of the hood with the tube, when the latter two are screwed together, and a third one at the fore end of the tube. The reflector is supported by a triple-jointed arm, and may be drawn into any position required to receive the rays and reflect them into the throat. The cut presented shows these details, and also represents the relative position of physician, patient, and lamp required for a successful inspection.

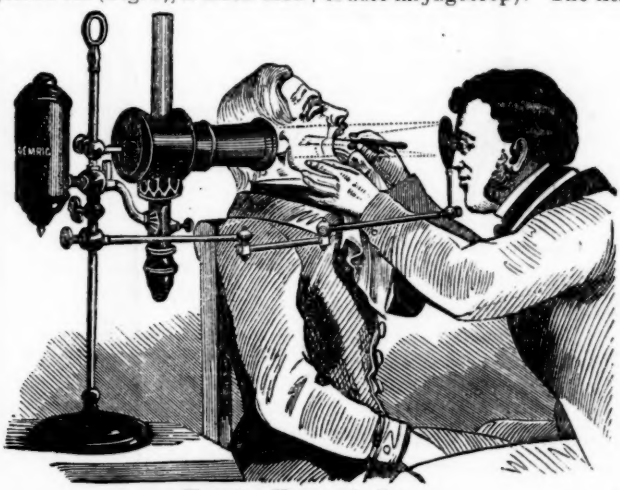

FIG. 3.—TOBOLD'S LAMP.

I have in my office the lamp shown in the annexed cut, invented by Lewin. The perspicuousness of the figure will render any lengthy description unnecessary. The illuminating apparatus is fixed upon an iron tripod; to the lamp a brass bar is attached supporting two mirrors, one oval and concave, to receive the parallel rays as they issue from the lantern and reflect them into the throat of the patient; the other mirror is plain concave upon one side, so that it may be brought close to the oval one, and is intended for the practice of auto-laryngoscopy. The little shelf fastened to the perpendicular rod holds the instruments being employed. The lantern slides up and down, and revolves upon the rod so that it may be fixed in any position required. It gives a bright and clear light, equal to any instrument I have used. The lamp is mentioned because, with a little outlay, much less than required for any other special form, an excellent apparatus may be procured for office practice. The tripod may be procured from a photographer, the lamp of a tinner, and the lenses of an optician, and no particular artizan skill is required to put them together as shown. The one I have in use cost less than twelve dollars, and works to my entire satisfaction.

The tripod, when the lamp is removed, is used to support the plain mirror that I employ to throw a beam of sunlight into my office, the advantages of which, from its purity and whiteness, is great over other

FIG. 4—LEWIN'S LAMP.

means of illumination and various efforts have been and are now being made to procure a light assimilating to it in this desirable quality Dr. Thudichum remarks that "those who have tried sunlight for the inspection of the nose or larynx, and compared it with the light given out by oil-lamps specially adapted to the operation, and provided with complicated condensers, must have come to the conclusion that the latter are relatively useless. At all events, my own practice soon made me dissatisfied with such arrangements as Tobold's lamp—instruments which I found top-heavy and unstable, and whose horizontal beam of light did not satisfy my demands for inspection, much less my requirements for illumination during operations. I therefore established a platform before the window of my consulting room, in order to be able to utilize sunlight, thrown into the room by means of a heliostat, on all practicable occasions. Some diagnoses and operations which I had opportunities of making by the aid of this light, and which I am convinced could not have been made with the aid of an oil lamp, however artfully devised, caused me to construct the following adaptation of Drummond's light to medical purposes:

"A small lantern carries the arrangements swhich are required for the production of the pirit-oxygen-lime light. The glass spirit-lamp

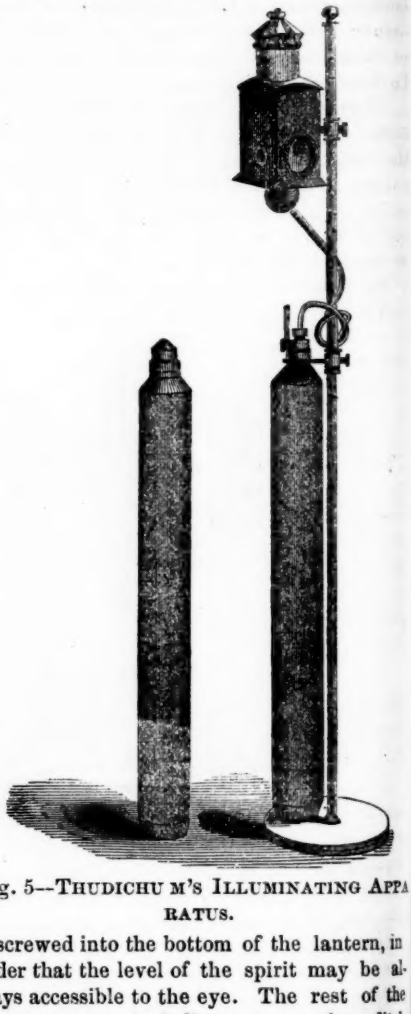

Fig. 5—THUDICHUM'S ILLUMINATING APPARATUS.

is screwed into the bottom of the lantern, in order that the level of the spirit may be always accessible to the eye. The rest of the arrangements, including an annular ditch round the burner, to be filled with water intended to cool the burner, are inside the lantern. The oxygen is supplied from an iron bottle underneath the lantern, in which it is contained under pressure produced by the condensation in it of several atmospheres of gas. A delicate screw-valve, moved by a lever, easily regulates the flow of gas. The bottle and lantern are fixed to a stand, being a brass rod screwed in a heavy circular iron plate. Any position can be imparted to the lantern by means of the ball-and-socket joint on its attached side, and the screw sliding clamp,

which fixes it to the rod. The light passes through a system of condensers in front of the lantern, and can be brought to a focus at any desired distance by the sliding arrangement of the bottom of the lantern which carries the light.

"The lantern in this form is eminently practical. It is easily lighted; a match inflames the spirit, the lime is fixed by its side, the oxygen is turned on, and within a minute or two a splendid beam of light is projected from the condensers. The direction of the beam is readily adapted to the requirements of the operator. For laryngoscopy and rhinoscopy he carries the concave mirror on his forehead over a screen, which, as the light comes from above, can be so adjusted as to completely protect the eye from any incident rays, and leave it all its pupillary space for the inspection of the illuminative cavities. The lamp is put out as easily as it is lighted; the oxygen is turned off; the lime-cylinder buried in lime-powder in a suitable receptacle; the spirit extinguished by a brass cap which fits into the water-ditch. The amount of gas in the bottle can always be controlled by a pressure guage to be screwed on to the top of it."

The employment of oxygen has also been utilized by introducing it into the ordinary gas flame by an Argand burner. It gives a beautifully white, clear light.

Of course these modes of illumination entail additional apparatus and expense, and cannot come into general use, while in those exceptional cases in which stronger and clearer light than ordinary may be required, the pure light of the sun may be employed which, in my experience, has not as yet been surpassed for laryngoscopic purposes by any contrivance yet devised. The general arrangement required for utilizing it will depend upon the circumstances of situation. In my own office, which has an eastern exposure, admitting light by a large window, I have arranged a plain mirror six inches in diameter, supported at the end of a jointed iron rod, projecting out of the window three feet, and capable of being placed at any angle or elevation by the doubly jointed rod. The inner end of the rod may be clamped to the window sill, or, as I have it fixed, supported by an iron stand used by photographers. In this manner the solar rays may be thrown into the room in a horizontal direction at any hour of the day, from sunrise to 1 P. M., when the sun, having passed meridian, his rays are cut off by the eaves of my house. Of course, under the best circumstances of situation, it is possible thus to command a horizontal beam of solar rays between sunrise and sunset.

This beam may be either directly thrown into the throat upon the pharyngeal mirror, in which case the patient will face the window, or the beam may be received upon a concave mirror, and from this reflected into the throat; the patient will have then to sit with his back to the window. I often employ the reflector attached to the head band or spectacle frames; sometimes the reflector attached to the large Tobold, upon my center table, the arm of which has only to be slung out horizontally in front of the patient.

The light thus obtained is beautifully bright and white, surpassing the light, in these respects, of the ordinary oil or gas lamps. When the day is fine and unclouded, I never use any other sources of light, and find it answer well all the requirements of laryngoscopic illumination, without entailing the slightest trouble, or the expense of the complex lamps of Tobold, Lewin, Von Brüns and others; but not being able to command this light just when it may be wanted, from circumstance of weather or situation, this method does not possess the value of artificial illumination, always accessible by the physician. It should be observed that the light in this method is so controlled that neither the patient's head nor the observer's face are exposed, the latter being shaded by drawing in one of the shutters, so that the beam of light impinges solely upon the concave mirror before the eye, or upon the forehead. You can receive the beam entering laterally—that is, by the side of or over the patient's head, according as the plain mirror projected from the window is placed. Of course, in employing the sun's rays directly, this is not the case, and both observer and patient will find themselves greatly inconvenienced by the heat.

Light either artificial or natural may be employed by the laryngoscopist directly or indirectly. In the former case no reflector is used, the lamp being placed close to and in front of the patient's mouth; the observer occupying a position behind the light, his eyes being shaded by a hemi-cylindrical sheet-iron hood placed behind the chimney of the lamp. The most convenient way of conducting this examination by direct light is for the examiner and

patient to sit at a narrow table, the lamp occupying a position between them, each arm of the former being upon either side of the lamp, as it were embracing it. There is a disadvantage arising in this mode of illumination, as the head has to be held to one side of the lamp. The visual ray and the luminous rays are not parallel, but form different angles with the surface of the throat mirror, so that it may occur that a point in the larynx may be illuminated and yet not be seen, as the returning ray by which its image is seen in the mirror does not strike the eye of the observer. This cannot occur in using reflected light with a perforated mirror, as the returning ray always coincides with the visual ray. Yet the angle is not so great that the examination may not be conducted with success, although there are other drawbacks also attaching to the method, such as the cheek on the side of the light throwing a shadow, and the hand between the lamp and the patient's month cutting off the luminous rays. I often proceed in this manner when away from office; but it will be found more convenient to avoid these difficulties of direct illumination, and have recourse to reflected light in all cases involving the use of instruments.

Besides the method of illuminating the larynx we have now described, there is another one described by Czermak, and called by him *illumination by transparency*. He says that the larynx and trachea have, as he has pointed out, in certain spots, a certain degree of transparency, the same as the tissues which they cover. In delicate persons we perceive the glottis illuminated by a reddish light, when the sun falls upon the external surface of the neck. But when we concentrate the clear light by the aid of a concave mirror, or by a lens, upon particular spots about the neck, some one or other part of the larynx becomes transparent, like a finger placed before a flame. This transparency, of a beautiful incandescent red, is at times sufficient to permit of laryngoscopic examination. The concentrated light from gas sometimes produces, but less distinctly, the same effect. He further adds that it would be possible to employ this proceeding to the examination of the thickness of the vocal cords, varying according to the physiological or pathological circumstances, and above all, to the correct appreciation of the seat and depth of the alteration in the trachea.

IV.—MODE OF APPLICATION OF THE INSTRUMENTS.

Having described the instruments required in laryngoscopy, we shall now endeavor to teach how they should be used. The patient should be comfortably seated by the table upon which the illuminating apparatus stands, with his body erect and head slightly thrown back, as shown in Fig. 3. He should be quieted mentally likewise, the physician assuring him of the painless character of the exploration, thereby securing his coöperation, as far as lies in his power, to render the inspection satisfactory, instead of shrinking, as many do, particularly children and nervous females, with apprehension of some physical suffering when the mirror is placed in the throat. The light should be placed by the side of the patient's head, the flame about on a level with his eye. The observer sits opposite the patient, his eye on a level with the patient's mouth and distant about twelve or fourteen inches. When this disposition has been made, the reflector is first tried, and put in that position that when the patient's mouth is widely open the back of the pharynx is thoroughly illuminated. The patient should be directed to protrude his tongue, which may be taken hold upon with the fingers of the physician, previously guarded with a towel or napkin, and drawn outward, taking care not to press it too hard upon the lower teeth and cause pain. When the physician desires to use both his hands he may intrust the charge of the tongue to the patient's fingers, and in general I find that after one or two trials this is accomplished sufficiently well, and that persons usually prefer to do it. It gives their minds employment, thus taking their attention from the manipulations of the operator, which is often of decided advantage. The physician now takes his throat mirror in his hand, supporting it with the thumb and two first fingers as we do a pen, and having warmed it over the chimney of the lamp, he tests its temperature by bringing it in contact with his cheek or back of the hand, and then holding its reflecting surface downward, passes it promptly into the back of the mouth, pressing the uvula backward and upward, and at the same time carries its handle to the corner of the mouth. The mirror should be held steadily, and not be permitted to wobble about, coming in contact first with the tongue, then with the pharyngeal walls, which will most certainly cause ef-

forts at retching, and prevent, at least for the time being, the success of the inspection. It is surprising, when this point is attended to, how little annoyance is caused by its presence. I have often succeeded perfectly with intelligent children in obtaining a good view at the first sitting.

It is important to become ambi-dextrous in laryngeal manipulations, and the observer will find that its great convenience will amply repay him for any amount of outlay of time and patience. With this view he should practice frequently with the mirror and other instruments, using the left hand. The mirror should not generally be held longer in the throat than a few seconds at a time. To avoid the irritation that must ensue therefrom, it will be better then to repeat the manœuvering immediately as often as may be necessary, rather than prolong its presence, which induces retching, and renders the throat much less tolerant of a repetition. In fact, if retching be excited by the mirror at any time, long or short, it is better to withdraw it and wait a few minutes, until the easily excited muscles are more quiet. When the velum is long and hangs well down over the base of the tongue, the space is so narrowed that some difficulty may be experienced in passing the mirror beyond the arches of the throat. In this case, direct the patient to intone some vowel sound, particularly *eh*; the velum will then be raised sufficiently to permit the mirror to be slipped back to the pharynx in the proper angular position. The base of the tongue sometimes rises to an inconvenient height, so as to touch the mirror, blurring its reflecting surface and preventing the image being seen. This difficulty may be overcome by not drawing the tongue too far from the mouth, and elevating its point a little.

Irritability of the throat may be greatly diminished by holding fragments of ice well back in the mouth against the velum, or applying an India-rubber ice sac to the neck a few minutes. Ice is the very best agent for quelling this irritability, and secures us a satisfactory examination when other agents fail. The fact of bromide of ammonium having an anæsthetic power over the structures of the throat has suggested its employment in laryngoscopy. It is given internally, and applied in a strong solution to the fauces and palate. A patient trial of this agent did not enable me to realize its asserted efficacy in rendering the parts more tolerant of the mirror.

When the tonsils are enlarged, as they sometimes are, interfering with the manipulation of the mirror, they must either be first removed or reduced in size by Vienna paste, or an oval mirror employed.

Should the operator be successful in getting the mirror into its proper position, it may happen in certain cases that he can not see even the arytenoid cartilages, much less the vocal cords, on account of the epiglottis being pendant, that is, hanging too far back toward the posterior pharyngeal wall. Generally the arytenoid cartilages can be seen under such circumstances, and we can judge by them in a great measure of the mobility of the cords; but here these indications cease, for their condition is by no means sufficient upon which to ground an opinion as to the state of the laryngeal mucous membrane. This pendulous condition of the epiglottis is due in most cases to congenital defect, but in some of the cases we encounter in practice, it is to be attributable to a relaxation of the glosso-epiglottean ligament. According to the statistics of Gibb, the epiglottis is found pendant in eleven per cent. of all the cases examined. We have recourse in overcoming this obstacle to the physiological fact that in emitting the higher or falsetto notes the epiglottis is raised; the patient should therefore be directed to intone *e*, *ah*, *eh*, in a high pitch. In altogether exceptional cases some mechanical contrivance may be required to raise the epiglottis. Voltolini, Fournié, Lewin, Von Brüns, Mackenzie, have invented special instruments for this purpose.

For a mere inspection I find that my palate hook, shown in Fig. 5, armed at the end of the handle with a little pad of India rubber, may be used with less irritation than the forceps, and quite as efficiently. The hook is simply bent into the proper curve, and the pad is brought into contact with the laryngeal surface of the epiglottis, which is then pushed forward and spread out, as it were, against the base of the tongue. I have been able in my own case, after some practice, to do this effectually with the hook. The sensation produced in touching the epiglottis is much more disagreeable than that resulting from touching the tongue, palate or pharyngeal walls; it is a sore feeling that is almost always on first trials followed by retching.

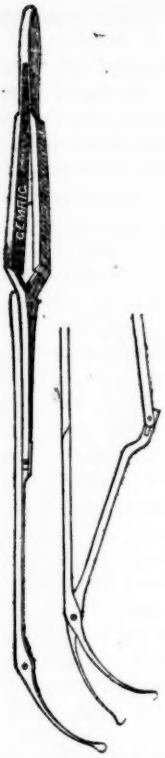

Fig. 6.—VON BRUNS' EPIGLOTTIC FORCEPS.

It has been suggested that in order to keep the patient steady, and prevent his flinching during the inspection of the larynx, that his head be supported by a rest attached to the back of the chair, and rising with a broad extremity, into which the occiput is received. I have not, with intelligent grown persons, found any such arrangement necessary when making a simple inspection, though it is serviceable while employing instruments where a little motion of the head is very inconvenient.

We will sometimes be called to make examination of cases confined to bed, and here the mirror will have to be supported before the face, Semeleder's spectacle mirror being the best. The lamp is brought close to the side of the patient's head, and the physician, seated upon the side of the bed, will proceed gently in the general manner we have already indicated.

V.—THE NORMAL LARYNGOSCOPIC IMAGE.

In order to render the account we shall give of the normal laryngeal image more easily intelligible, we shall present two views of the healthy larynx as seen in the mirror during respiration and during phonation. The extent of view obtainable will vary in different cases. Under the least favorable circumstances the base of the tongue and the laryngeal surface and tip of the epiglottis will alone be seen,

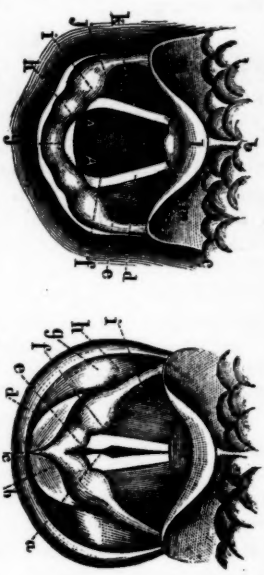

Fig. 7—VIEW OF LARYNX IN QUIET RESPIRATION.

Fig. 8—VIEW OF LARYNX IN PHONATION.

but by a more favorable disposition of the parts, as when the patient is directed to pronounce *eh*, the base of the tongue and the glottis rise a little, and at that instant we see the arytenoid cartilages, perhaps also the cartilages of Wrisburg, and get a glimpse of the posterior portion of the vocal cords. After a few trials, and in cases well adapted from the conformation of the parts to laryngoscopic exploration, we can see the totality of the vocal cords to their insertion into the angle of the thyroid cartilage, the rings of the trachea, cricoid cartilages, the crico-thyroid membranes, and even the apertures of the bronchi. Commencing in the order we perceive the parts, we shall first describe the epiglottis: It is subject to considerable varieties in shape in different persons; being in some flat and leaf-like, in others folded as it were upon itself, and forming curves which give it some resemblance in shape to the Greek letter Omega. Its variation in size is equally apparent, there being every gradation between the small narrow epiglottis and the long expanded form sometimes seen. The position we have al-

ready adverted to, mentioning that it sometimes stood erect, its upper surface lying against the base of the tongue and its under apparent in the mirror; in other cases it being well backward, the upper portion of its lateral borders touching the posterior wall of the pharynx. In the former case, when the epiglottis is erected, and we glance along its laryngeal surface, we see at its base a projection of a roundish form overlaying the insertion of the vocal cord, called the cushion. The lingual surface of the epiglottis is of a pinkish color, its lips pinkish-yellow, and its inferior surface also of a pinkish hue; but this easily changes to deep red from slight causes, and is sometimes seen presenting this hue.

From the base of the median line of the epiglottis we see the prominent folds of mucous membrane running upward and losing themselves in the membrane covering the base of the tongue, forming the glosso-epiglottidean ligaments. Above the epiglottis is the base of the tongue, marked by the V shaped arrangement of the papillæ circumvallatæ, and between the two on either side of the glosso-epiglottis ligaments, are those pocket-like depression called the vellecular fossæ, of a pale drab color, and containing a varying amount of secretion according to age.

Extending latterly in a downward and backward direction from the base of the epiglottis to the arytænoid cartilages, are seen the arytæno-epiglottidean folds, forming the lateral margins of the laryngeal aperture. They are of a pale pink color like the gums, and follow the motions of the vocal cords retreating from each other with the utterance of the lower notes, and approximating with the higher, in the former case becoming relaxed and broader, and in the latter narrow and tenser; these folds also vary in different persons, independent of their degree of tension.

Enclosed in the duplicature of the arytenoid folds, and at their posterior extremities, are the arytænoid cartilages of a lighter color than the surrounding membrane, their position being indicated by small rounded tubercules resting upon the upper surface, called the cartilages of Santorini. These cartilages are connected in the middle line by a concave sweep of mucous membrane, named the inter-arytænoid commisure, which is wide when the arytænoid cartilages are separated in deep breathing and in vocalization, when the cartilages come together, folds upon itself, the angle being posterior.

A little farther outward than the capitula Santorini are the cartilages of Wrisberg, one upon each side, larger than the former, forming generally rounded prominences, but occasionally triangular, of yellowish-pink color, having been likened in this respect to a fully matured abscess. The development of these cartilages vary in different persons; when there is much sub-mucous cellular tissue, and particularly in the negro, they are large and readily seen, even in quiet breathing; but be they small or large, a better view can always be had of them in articulating the sounds *a*, *e*, *eh*, which bring the vocal cords together. Sometimes there is a little cartilage forming a third rounded protuberance developed between the cartilages of Wrisberg and the capitula Santorini.

The ventricular bands (false vocal cords) are seen as pink or rose-colored folds of mucous membrane, extending from near the angle of the thyroid cartilage close to the root of the epiglottis backward, to be inserted to the arytenoid cartilages. They are rather more prominent, particularly their lower margin, than the aryteno-epiglottic folds; and below them, separated by a slightly depressed space called the vestibule of the larynx, which becomes broader, and therefore more apparent as the vocal cords are approximated in phonation.

The ventricles of the larynx may often be seen in most cases, but more especially in negroes, as dark lines between the ventricular bands above and the vocal cords below.

The vocal cords come into view most prominently as tendinous-looking, glistening-white cords, when the patient is directed to sound *eh*. They are then seen closely approximated to each other and parallel, the vocal process being turned inward; but as the sound dies away they separate posteriorly by the rotation of the arytenoid cartilages outward, which movement throws the anterior extremity of the vocal process outward, giving the glottis a lozenge shape. Below the vocal cords are seen a broad yellow band, formed by the inner surface of the cricoid cartilage, and still deeper, the rings of the trachea separated by the pinkish intervening mucous membrane. When the trachea can be made quite straight, and the laryngoscopic conditions most favorable for inspection, the bifurcation of the trachea may be observed as a bright central line, with a dark circular space on each side of it, the

apertures of the bronchi, and we may even be able to peer down the right one.

Externally to the glottis, bounded on the outside by the thyroid cartilage and upon the inner by the aryteno-epiglottic folds, is seen the hyoid fossa, with the great cornua of the hyoid bone crossing its external wall on the bottom. This is the location in which fish-bones or particles of food often catch. In the median line we see the posterior surface of the cricoid cartilage inclining downward and backward to the posterior wall of the pharynx, with which it is in contact.

VI.—AUTO-LARYNGOSCOPY, OR SELF-DEMONSTRATION.

The labors of Garcia, who originated auto-laryngoscopy, have already been alluded to. He employed for this purpose a simple hand-glass and the throat mirror. Standing with his back to the sun, the solar rays were received upon the hand-mirror and directed into the throat, at the same time he perceived the reflected image in this mirror. This is a very simple and efficient method of self-inspection, but the best apparatus for this sort of exploration and demonstration is that of Czermak, consisting of a large concave reflector and a plain quadrangular piece of looking-glass. The concave mirror is mounted upon an upright bar having a second bar projecting from it horizontally, and upon the extremity of the latter is borne a vertical bar supporting the plain mirror. By this disposition of the points of the apparatus the mirrors may be placed in any position, and for auto-laryngoscopy this is as follows: The stand bearing the mirrors is put upon the edge of a table, the mirrors about twelve or fourteen inches apart, the plain one just below the lower border of the concave one, and the observer takes his seat a few inches in front of the former. The lamp is placed at the side of the bar bearing the plain glass, and in front of the concave mirror, the eyes being shielded from the light by a semi-cylindrical hood attached to the lamp of the chimney. The observer now opens his mouth widely and introduces the throat mirror, previously warmed, upon which the concave mirror throws the luminous rays, and the image becomes visible in the plain mirror. A person standing behind the concave mirror may also see the observer's larynx.

To the lamp already described a plain mirror may be attached, and thus do away with the necessity for a special apparatus.

Under this head we may more properly place that special mode of demonstrating a patient's larynx to others, called in some of the books by the absurd name of recipro-laryngoscopy. There are several plans of doing this. The one in which I have been particularly successful is that of Dr. Smily, of Dublin. This observer, after recounting the difficulties of another person inspecting the larynx at the same time as the operator, by the ordinary apparatus, partly on account of the difference in the angles of reflection, formed by the rays reaching their eyes, and partly from other causes, goes on to say that his instrument consists of a simple square piece of very good plate-glass mirror, set in brass like the ordinary concave mirror; both are attached to a frontal band; the plain mirror being supported before one eye, and the perforated concave one before the other. As the angles of incidence and reflection are equal, the mirror may be turned to such an angle that the second examiner may be placed at such a distance from both the patient and operator that his presence cannot disturb the steadiness of either. The view the second examiner has of the larynx in the square mirror is not inverted, being twice reflected.

VII—INFRA-GLOTTIC LARYNGOSCOPY.

This procedure, which consists in viewing the vocal cords from below by a mirror introduced through the opening made in tracheotomy, was suggested by Neudœfer, and practiced by him upon the dead subject. A year later, in 1859, Czermak first made an application of it upon the living. It is required in these cases, when the ordinary method of inspecting from above is impossible from adhesion of the epiglottis, or obstruction of the glottis. The mirrors are very small, metallic, and highly polished, held in the laryngal wound, with the reflecting surface pointing upward. The edges of the incision are to be kept apart by a canula, with a portion of its upper segment removed so as to furnish a free passage for the luminous rays upward, and thorough illumination. From the small size of the mirror, and rapid cooling, it will have to be heated repeatedly, or the plan suggested by Czermak adopted, of covering its surface with a film of solution of gum arabic. Buzzard's idea of employing in the same manner a mixture of equal quantities of water and glycerine will answer

as well. I would, however, prefer the plan of Dr. Wright, of sustaining the temperature of the mirror by electricity, the back of which has encased in it a little coil of wire, which is connected, by two wires running through the handle, with the battery.

The vocal cords do not present the pearly white color seen from above, but a deep pink color. They are laterally inverted in the same manner as we have already explained.

VIII.—MEANS OF ENLARGING AND MEASURING THE LARYNGOSCOPIC IMAGE.

Magnifying Apparatus.—The attempts of Wertheim at magnifying the laryngoscopic image by means of concave laryngeal mirrors have been alluded to as possessing no practical importance whatever, as the parts to be examined are placed at different distances, so that numerous mirrors of different focus would be necessary to complete a laryngeal inspection. Perhaps one single mirror might suffice for the posterior nares, but really, as objected by Türck, their magnifying power is but small. This author has employed with this view a simple Gallilean telescope, which is borne upon one of the arms of his illuminating apparatus. Voltolini, seeking means of amplification, had recourse at one time to an opera glass, from which he removed the ocular; at another to a small telescope, from which he removed all the glasses except the objective. He obtained good results with sunlight, when the patient's head was held steady in a supporting apparatus. As yet no result has flown from these experiments to the benefit of laryngeal therapeutics, in which the plain mirror has superior advantages.

Dr. Gibb alludes to the Chadburn lantern for projecting enlarged images of open objects upon a screen, as presenting a reasonable prospect of rendering service in demonstration. The light requires to be close to the object exhibited; and if held near the mouth, with the laryngeal mirror properly adjusted, the exterior of the larynx would be magnified to an enormous size, and depicted upon the screen of the natural color, showing also any of the special motions, illustrating the power of voluntary motion over the laryngeal muscles. It might be used to show cases of chronic disease of the larynx, especially polypi and warts.

Measuring Apparatus.—With a view of getting at the real size of the parts in the larynx, it has been proposed by Mandl, of Paris, to have a scale scratched upon the mirror surface; then, by comparing the size of the laryngeal images formed with the images of bodies of known size, the actual size could easily be ascertained. But it would be preferable, as suggested by Semeleder, to have the scale made upon the metallic edge of the mirror, and thus save the reflecting surface from being scratched with the required number of lines.

Merkel, of Leipsic, has also been engaged upon the same investigation, but the practical laryngoscopist has yet to wait for these experiments to culminate in something more definite than has been hitherto accomplished before he can hope to avail himself of the advantages that would accrue from the possession of a satisfactory method of ascertaining the size of objects presented in the mirror.

EDITORIAL DEPARTMENT.

PERISCOPE.

The Treatment of Pain.

On this eminently practical point, Dr. J. P. ATKINSON discourses as follows in the *Practitioner*:

The chief things I would advise for the restoration of nerve-power are rest and support. The latter must always be administered in such a form as is compatible with the weakened state of the digestion. In cases of extreme mental distress, accompanied by insomnia, where the *fons et origo mali* is the brain, I would recommend such articles of food as corn-flour, bread and milk, eggs, and beef-tea, more especially the first two. If stimulants are required, the best are ammonia, tea, coffee, etc. Rest is most readily obtained by the bromide of ammonium or potassium, or the hydrate of chloral. Where the cause of the pain is eccentric, or dependent upon a disordered state of the blood, I would suggest the employment of alcohol in preference to the stimulants mentioned above. It should be repeated often, and in small quantity. Flushing of the face, increased temperature, quickened pulses with increased dicrotism, the appear-

ance of alcohol unaltered in the urine, are one and all indications that it is being given in excess; while the opposite of these symptoms are indications that benefit is resulting from its use. Here opium clearly shows what it can do in restoring nerve-power and procuring rest. It may be applied either locally or given internally. Hypodermic injection is certainly a very valuable way of administering sedatives; occasionally, where the hypodermic injection of morphia and atropine fails, an amelioration is quickly obtained from a series of blisters and applications of morphia to the denuded surface. In some cases, atropine, morphia, and tincture of aconite, when mixed with chloroform, and simply applied to the skin, seem to afford as much ease as when they are used hypodermically. Some attacks of brow ague are instantly and permanently relieved by local anæsthesia. Local stimulants also occasionally effect a great deal of good. As regards the medicinal treatment of pain, it may be said in few words to consist in the administration of nerve tonics with sedatives; thus, for neuralgia, quinine, arsenic, or chloride of ammonium, are generally prescribed, with belladonna, colchicum, conium, lactuca, or cannabis indica; for neuralgia of the testis, perchloride of iron. Hemicrania is almost always benefited by muriate of cinchonine or iodide of potassium. The twichings that accompany locomotor ataxy are generally relieved by nitrate of silver in combination with belladonna. Numerous other instances might be given where nerve tonics and blood restorers are prescribed for the relief of pain; but these, I think, are sufficient.

Legislation on Insanity.

The blind zeal of certain persons of late, encouraged by a senseless hue and cry in magazines and newspapers, who have been urging legislation on Insanity, is well shown up in the following allusion to the working of the Illinois law in an address of Dr. A. McFARLAND to the electors of Morgan county, Ill. The Doctor seeks a seat in the lower house of the next legislature, and if he succeed in obtaining it, we judge from the tone of this extract, that the present law will receive at least a portion of his attention. The doctor says:

"Among the base measures used by an unscrupulous ring, was a simultaneous attack on all the State interests of Jacksonville. The attack got an especial point as regards myself from the appearance on the stage, at this particular time, of an insane woman, whose rebuked free-love advances gave to her malignity all the venom proverbially attributed to the 'woman scorned.' Of all that followed for a year afterwards, at the cost to the State, of many thousands of dollars, with no result except to enable an ambitious politician, of little capacity and less principle, to figure for his brief hour on the stage, I make no mention—the whole being too purely personal, and only touched upon here as prefatory of the particular matter I wish to introduce.

"Among the devices conceived to annoy and punish the individual particularly aimed at, was an enactment, speciously entitled: 'An Act for the Protection of Personal Liberty,' clearly intended as a stinging insult to the Superintendent of the State Hospital; imputing to him a disposition to commit a high crime against the liberty of the innocent unfortunate, and appending the most degrading penalties known to the law for the offense. An act to prevent John Brown, of a particular city, street, and number, from stealing sheep, could be no more justly offensive to the John Brown indicated than is this enactment to myself. But the personal affront, attempted in the passage of the act, bears no proportion whatever to the wide-spread and cruel wrong it has inflicted on the class it is ostensibly intended to benefit. Its first effect was to draw from the quiet of their apartments nearly all the inmates of the State Hospital, and subject them to the mockery of a new inquisition—a measure full of disaster, but for the rare good sense and discretion of a Morgan county court and jury. Since that period no individual in Illinois, whatever may have been the circumstances of sex, age, physical health, or residence, who has needed treatment at the institution, but has had to pass the harsh ordeal laid down in this most singular statute. It converts every unfortunate insane person into a *defendant in a prosecution*, in which the dearest friends of the party are, in the necessity of the case, converted into apparent enemies. It often takes the invalid from the bed of sickness, to be transported, perhaps miles in an opposite direction from the institution, to a county seat, there to be judged by the ignorant hangers-on of a court house, who must hear prior to their decision, the secrets of the family and the sick-room laid bare as the accidents of the case may determine. What should be decided by a county judge in the privacy of his chambers, and upon the certificates of medical men, is made to depend upon the haphazard opinions and caprices of men grossly ignorant of the subject before them, the obvious effect of which frequently is to defeat the most kindly intentions of friends, and consign to hopeless insanity many whom a more ready access to the institution would have restored to reason and society. This enactment has met the derision, and received the protest of every philanthropic mind throughout the land. Persons of any sensibility who have the means, evade it by transporting insane friends to distant private institutions. Within a year, the ecclesiastical head of a great religious body, and also a member of the convention chosen to frame a new constitution for the State, have been

carried out of the State rather than be submitted to so odious an inquisition. The imagined wrong it was pretendedly set up to correct, thus affords a pretext for a greater possible wrong, in this constant abduction."

Carbolic and Cresylic Acids.

The *Druggist's Circular* says: These two bodies are so commonly known under the name of acids that we will continue to call them so, although by chemists they are more generally classed with the alcohols. They have great similarity, and only within the last few years have they been met with in commerce separately, having until then been both known as carbolic acid. Creosote, prepared from coal-tar, one of the most powerful antiseptics known, was thought to be impure carbolic acid until 1854, when Prof. Williamson and Mr. Fairlie, in an investigation of it, discovered it to be a mixture of carbolic and cresylic acids. It was then taken for granted that Reichenbach's creosote from wood-tar had a similar composition, until Hlasiwetz, in 1858, showed that creosote was a different body from either carbolic or cresylic acids. Finally Dr. Hugo Miller, in 1846, discovered that true creosote and its analogue guaiacol belonged to a different class of bodies, and consisted of methyloxy-phenic and methyl-oxy-cresylic acids. No experiments on a large scale have yet been tried with true creosote.

Pure carbolic acid is a white crystalline solid, melting at 34° C., and distilling at 180° C. A trace of water or oily impurities renders it liquid, and it is always applied in this form.

Cresylic acid is a liquid, boiling at 203° C., and closely resembles carbolic acid in order and other properties. It was formerly thought to be of no value as a disinfectant, but Dr. Angus Smith has lately shown that it rivals, if it does not surpass, carbolic acid in antiseptic properties. To distinguish it from carbolic acid is a matter of great nicety, even to an accomplished chemist.

The Febrifuge Action of Cold Water Used Internally.

Dr. JAMES S. BAILEY, of Albany, New York, reports the following cases in the Buffalo *Medical and Surgical Journal*:

During the war, while standing in a Southern depot, I was attracted by the groans of a man lying upon the floor in the corner of the room apparently suffering much. It was evident that he had a chill, closely approximating congestion, and now that reaction was established, in the delirium of fever he was muttering incoherently. I handed him a pint cup full of water which he drank much to the relief of his parched throat; I gave him another, which seemed to slake his thirst; a third cup was handed him, and with a little persuasion he drank it also, but in a few moments all three were vomited. I then insisted upon his taking the fourth cupful, when he again vomited the water, with large quantities of dark ropy bile. He was soon bathed in a profuse perspiration, the circulation became equalized, and there was an abatement of fever. I then prescribed Sulph. Quinine grs. v, and Sulph. Morphia gr. 1-16; Pulv. Ipecac gr. ½; —every three hours. By the next morning he was enabled to resume his duties.

Within the last month I was called to prescribe for a young lady (A Louisiana Creole) who had just arrived in this city from Aspinwall, after a residence of twelve months in that locality. She was suffering from an attack of miasmatic fever, and represented the anemic appearance so common among persons whose blood has been thinned by a long residence in a warm climate. The spleen was much enlarged and congested, and, consequently, there was considerable tenderness and pain over this region. The nausea was excessive, and she vomited considerable blood, with matter deeply tinged with bile; her pulse numbered 120 and was small and thready; the countenance wore a peculiar pinched expression; skin dry and hot, and thirst excessive. Such was her condition when I first saw her. I immediately prescribed the free use of cold water internally; when she had drank about three pints she vomited copiously, which produced relaxation of the system and she perspired freely. The temperature was soon reduced, and she passed into a quiet and refreshing sleep. By the use of antiperiodics and tonics she was soon sufficiently improved to resume her journey homeward.

Temporary Blindness Following Intermittent Fever.

The following case is translated from a Vienna Medical Journal in the *Boston Medical and Surgical Journal*:

The patient was a robust young man aged nineteen. When first seen by the physicians, he was lying in violent clonic convulsions, entirely insensible; the body was sweating moderately, the pulse was 110, the pupils reacted slightly. He had been suffering during the previous fort-night with *intermittens tertiana postponea*; the attacks, however, had never reached the intensity of the one in question. The bystanders thought the man was dying. The symptoms being apparently referable to the "chill," which had made its regular appearance on that day, and had already passed into the sweating stage, a favorable prognosis was given. Three hours later the patient was found in the full possession of consciousness, bathed in perspiration, and weeping bitterly at the loss of his eye-sight. He said he had seen nothing since coming to his senses. The pu-

pil reacted distinctly to light; but the power of vision was reduced to a feeble perception of the light of a candle. Ophthalmoscopic examination gave a completely negative result; no pathological changes being visible either in the fundus or in the media. In view of the origin of this condition, it was thought best to administer a strong dose of quinia. The patient remained five hours longer in the same condition, then fell asleep (about 6 A. M.), and when he awoke the power of vision was completely restored. How much the quinia had to do with the favorable result, must remain uncertain. Pigmentary embolism of the *arteria centralis retinæ*, with consequent transitory disturbance of the nutrition, is suggested as a possible cause.

Poisonous Effects of Carbolic Acid.

The *Edinburgh Medical Journal* says: Professor Bardeleben found that when externally applied in surgical cases carbolic acid was absorbed and acted poisonously in about 1 case out of 10. This poisonous action was revealed often so early as the second day by a peculiar effect on the urine which, pale at first, became gradually darker on standing. No albumen was present in the urine, but the patients lost appetite and strength. He recommends as a substitute the sulphocarbolate of zinc, first employed by Wood. Mr. Lister states that he has never observed the peculiar dark urine since the paste was replaced by the lac plaster.

Dr. J. Wallace applied carbolic oil (1 to 8) to an abscess connected with morbus coxæ, in a child aged five. In about two months' time it was remarked that vomiting and dysphagia invariably followed each dressing, and on examining the urine he found it to possess a dark, smoky tint, very similar to the appearance of the urine in bad scarlatinal nephritis. Nitric acid added to the boiling urine threw down a heavy, dark precipitate. No trace of albumen. This deposit of pigment invariably appeared after each dressing with the carbolic acid, and disappeared again in a few days. A fortnight after the above symptoms were noted, he adopted Prof. Lister's most recent method of carbolic dressing by oilskin, coated with dextrine and shell lac, and carbolic acid plaster; matters became more favorable and the urine resumed its normal appearance. (*British Medical Journal*, April 30th). Dr. Lightfoot in the same journal reports a case in which alarming symptoms resembling those of pyæmic poisoning clearly resulted from the application of a weak aqueous carbolic lotion (1 to 50). The symptoms were developed three successive times when the lotion was employed and gradually subsided on its removal. Vomiting was dangerously severe, so that the patient's life was almost despaired of, but the urine was not darkened in color. Numerous observers have recently met with cases of poisoning in connexion with the use of carbolic acid, and it is very necessary to observe caution as to the too free external use of this agent. The *black* or darkened urine, which is the most constant symptom, has been shown to occur in an equally marked form, whether tar or some colorless preparation of it be the agent employed. The exact cause of the coloration is still an open question, but it is at least probable that the coloring matter is not derived from the blood. The constitutional disturbance is sometimes very grave, and seems to bear some connexion with different forms of solution of carbolic acid, the lac plaster appearing to be the safest, while a weak watery solution, freely used, apparently involves the most risk.

Glycerine.

Dr. Hager is convinced that glycerine often determines, particularly in regions where the skin is thin and delicate, erythematous and other eruptions. Hager found in a glycerine which produced irritation oxalic and formic acids, and in some specimens, ammonia. Besides these impurities, M. Schepky has verified, in glycerine reputed to be pure, the presence of nitric acid, fatty volatile acids, and alkalies; traces of chlorine, lime, and sulphuric acid sometimes exist in glycerine which has not been distilled—(*Rev. de Thér. Med. Chir.*, No. 2, 1870.) M. Pérutz states that butyric acid can easily be detected by gently heating the glycerine with a little alcohol and strong sulphuric acid. If butyric acid be present the pine-apple odor of butyric ether will be developed. According to Mr. J. Watts, the foreign or Vienna glycerine is apt to contain chloride of calcium, as much as one gr. in ʒ iii. An old specimen of yellow glycerine in my possession, labeled "pure glycerine" gave a distinct precipitate with nitrate of silver, soluble in ammonia, and a slight cloudiness with oxalate of ammonium.

Belladonna in Constipation.

Attention may be drawn to the value in which belladonna is held in the treatment of simple constipation by many physicians. Dr. A. Fleming, of Birmingham, noticed some years ago, that, in prescribing atropia, slight relaxation of the bowels frequently took place one to four days after the alkaloid was taken. If any constipation had existed it was removed, and sometimes even purging was produced. Dr. Fleming gave atropia (1–60 gr.) in pill or solution, and often in combination with some saline purgatives and tonics.—(*Brit. Med. Journ.*, Dec., 1865.) Dr. S. G. Armor also speaks most favorably of the services of belladonna in chronic constipation due to atony of the colon, and especially in cases of a nervous and hysterical constitution. In such cases 1-50 to 1-40 gr. of atropia, or ½ gr. ext. bellad. two or three times daily will usually in

a short time bring about easy and natural defecation. (*—Amer. Practitioner*, Jan., 1870.) Dr. T. B. Nunneley, in the English *Practitioner*, adds his testimony in confirmation, and in dyspeptic constipation gives 1-6 to ⅓ gr. of the extract every morning on rising.

Reviews and Book Notices.

BOOK NOTICES.

The Practice of Medicine by Thomas Hawkes TANNER, M. D., F. L. S., member of the Royal College of Physicians, etc., etc. 5th American, from the 6th London edition. *Enlarged and thoroughly revised.* Pp. 1200, Philadelphia, Lindsay & Blakiston. *Price, cloth*, $6.00, *sheep*, $7.

Dr. Tanner began in a small way as a writer on the practice of medicine, his first work having been a mere hand-book. Successive editions, however, having been called for, the sixth appears as a portly volume of 1200 pages in its American reissue. This work is simply a reprint, not having passed through the hands of an American editor. Dr. Tanner has become one of our standard authorities in the practice of medicine. His style is pleasing, clear, and concise. Much information is given in a small compass. The work appears to be brought fully up to the times, though the English edition from which this is reprinted was issued just before the announcement by Liebreich of the remarkable hypnotic properties of the chloral hydrate. Consequently its place as a remedy will have to be supplied by the intelligence of the practitioner who has learned its valuable properties from the medical journals of the day.

Appended to the above is an appendix of Formulæ, including chapters on Climates for Invalids, and on Mineral Waters. No mention, whatever, is made, however, of the climate and mineral waters of this country. As a recent work on practice by an accepted authority, this work is to be commended to the notice of the profession, and is well worthy of their patronage. On behalf of those who will have occasion to study or read its pages, we desire to thank the publishers for the beautiful tinted paper and clear type used in the book.

Naval Hygiene. By Joseph Wilson, Surgeon, United States Navy. With an Appendix. Moving Men on Shipboard. By ALBERT C. GORGAS, Surgeon U. S. Navy. Reported to the Bureau of Medicine and Surgery. Published by order of the Navy Department. pp. 234. GOVERNMENT PRINTING OFFICE: Washington, D. C.

In a very pleasant, agreeable style, our author condenses in this work an immense amount of valuable information on the subject of Hygiene. He takes his reader to sea on a Government vessel, and introduces him to each part of it; makes him familiar with the various concomitants of a sea voyage—pitches a "man overboard" by way of bracing his nerves for an attack of sea-sickness; sings to him of "Home, sweet home," on purpose to bring on an attack of nostalgia; "goes through" a sailor's wardrobe; discusses the ration in all its varieties; how to keep and how to use provisions; how to make coffee, chocolate, and tea, but provides no condensed milk for these beverages, though he speaks of other condensed and desiccated provisions; indulges you with a chapter on the philosophy of nutrition; refreshes you with water in all its varieties, even to poisonous water, and tells you how to purify and preserve it; tells you some very good things about alcoholic and vinous drinks, which he does not seem to have a very exalted opinion of, very properly; treats you to various other drinks, then talks to you about the preservation of food, and tells you how you can have a vegetable garden on ship-board, in a small way, raise your own salad and keep off scurvy; then becomes a naturalist, and like Solomon, speaks "of trees from the cedar tree that is in Lebanon, even unto the hyssop that springs out of the wall, also of beasts, and of fowls, and of creeping things, and of fishes;" then gives you a touch of shipboard life within and near the tropics, with the various diseases to which you are exposed, and after thus whiling you on through thirty chapters, introduces you to his chum, who tells you how to move sick and wounded men on shipboard. The work is illustrated by sixteen wood cuts, and four lithographs of various fruits. There is also appended a list of authorities, a vocabulary, and a copious index. It is a very readable, pleasant work, not intended exclusively for the professional reader.

NOTES ON BOOKS.

We have received the following additional announcements of Medical Colleges: 5.—Louisville Medical College, 2d session, 1870–71. Session of 1869–70, matriculants, 70; graduates, 17. 6.—St. Louis Medical College, 29th session, 1870–71. Session of 1869–70, matriculants, 113; graduates, 43. 7.—Medical Department Iowa State University, first session, 1870–71. 8.—University of the City of New York, Medical Department, 29th session, 1870–71. 9.—University of Michigan, Medical Department, 1870–71. 10.—Harvard University, Medical Department, 87th session, 1870–71. Session of 1869–70, matriculants, 306. 11.—St. Louis College of Physicians and Surgeons, 2d session, 1870–71. Session of 1869–70, matriculants, 17.

We have received of William Wood & Co., New York, through Claxton, Remsen & Haffelfinger, the Theory and Practice of Obstetrics, by W. H. Byford, M. D. The Physical Exploration of the Rectum, by William Bodenhamer, A. M., M. D., and the Archives of Ophthalmology and Otology, vol. 1 No. 2.

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SEPTEMBER 17, 1870.

S. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

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The report of the Treasurer to the late meeting of the British Medical Association gives some indication of what it costs to publish a medical journal. The receipts of the Association were about $27,600, aside from the cost of paper and printing, of which no detailed statement is printed, are the following items of cost:

Compensation to Editor and Assistant, about	$1,700
Paid to contributors, about	3,000
Office expenses, "	1,100
Clerk, "	750
Total,	$6,550

We make the above estimate from the figures given in the Treasurer's report, but do not know how exactly they represent the actual cost. The item of office expenses seems to be very low, though the probability is, that the expense incident to mailing comes into the printer's account, which is not given. The income from advertisements must be considerable, but what becomes of that we have no means of knowing—whether it goes into the funds of the Association, or helps to in-

crease the compensation of those who have the management of the work.

The few items of the Treasurer's report that are given, give us some idea of the cost of conducting a weekly medical journal in London, where material and labor cost less than they do with us.

The cost for the items given above, for the publications of the REPORTER office is very nearly, if not quite as much. But the question with us is not one of cost, but of ability to pay. No medical journal in this country ever paid, we think we may say, half as much to the medical profession as the REPORTER has, and as its ability to pay has increased, we have expended more on the literary department of our publications, and expect to continue to do so within reasonable limits, and we are determined that no other journal shall surpass us in this regard.

THE QUESTION OF FINANCE.

This question is a serious one, always and everywhere, when income is dependent on uncertainties of business or on the stated contributions of individuals. It is the question in all our medical societies, large and small. We hear of it year after year from the treasurer of our American Medical Association, whose means of usefulness are cramped by the lack of funds. The following from a correspondent of the *British Medical Journal*, and the discussion at the recent meeting of the British Medical Association on publishing a volume of Transactions, shew that that vigorous body labors largely under the same difficulties that our own Association does in this regard. Who will arise to solve this problem?

The delay and laxity of a certain portion of members in paying their annual subscriptions of a guinea, notwithstanding repeated applications, has evidently, from the treasurer's statement at the annual meeting, become a serious matter. The Committee of Council have adopted a more stringent system of application than heretofore, but it does not seem effectual. If any one can point out where it can be improved, or how the collection of annual subscriptions can be more efficiently organized, I suppose that the Executive will be exceedingly glad to consider such suggestions. A good many people are slow in paying all subscriptions; but the members of this Association receive for their annual guinea not only all the advantages of social, scientific, and political organization, but also a weekly JOURNAL, which binds them together in constant communication, and which is besides such as private enterprise is only able to supply for a sum exceeding the total amount of the annual subscription to the Association for all its purposes. The subscription, therefore, becoming a veritable debt from each member to the whole for expenses incurred on his behalf in weekly postage, paper, and printing, on the faith of his promise to pay, it is fair to suggest that a member who continues to receive the JOURNAL weekly, and fails to pay his subscription, due on the 1st of January in each year, does an injustice to all his fellow-members, and that at the end of the year will have taken eighteen shillings out of their pocket, the actual outlay on what he receives on the faith of his promise to pay, for which he returns nothing.

Notes and Comments.

Modern Therapeutics.

A second edition of Dr. NAPHEYS' Compendium of Modern Therapeutics, enlarged, revised, and improved is in press and will appear soon. This work has had a very rapid sale, and seems to give general satisfaction.

Outbreak of an Epidemic in Chile.

Intelligence has been received, in Liverpool, of the breaking out of an epidemic in Colchagua, on the coast of Chile, the effects of which are stated to be "as sweeping as those of cholera or yellow fever." The *Libertad*, which publishes the information, says: "We do not desire to cause a groundless alarm, but, on the contrary, to point out the evil in order that a remedy may be sought with the necessary promptitude. The disease presents itself first in the form of a violent fever, and then on the second or third day, appear on the face spots of a gangrenous character, which develop themselves in two days, and produce death in the midst of the most cruel sufferings. The ulcers especially attack the mouth and nose, which fall off in pieces." The journal concludes by recommending that experienced medical men should be sent to study the disease. It is also thought desirable that all vessels arriving from Chile should be strictly inspected by the Customs officials.

Correspondence.

DOMESTIC.

Some Practical Observations.

EDS. MEDICAL AND SURGICAL REPORTER:—These observations have been made in a practice of twenty years in a malarial section of country and are presented to the younger members of the profession with no claim to originality but with an assurance of almost certain truth.

Quinine.

Quinine is an antidote to malarial poison and will cure all malarial fevers from the deadly con-

gestion, to the annoying fever and ague type, if administered in time and under proper circumstances.

The principle foes to the full benificent effects of quinine are bile and mucus. A stomach loaded with bile or coated with mucus cannot absorb quinine. To these two obstacles many of the failures of quinine may be attributed. You can get rid of the bile by an emetic, or cathartic or both—and of the mucus by a stimulating emetic.

When quinine appears to fail in the cure of chill and fever, administer an emetic, and great disks of mucus will be discharged as large as a dollar and as tenacious as mucilage. These we call "chill blossoms"—get rid of them, then give quinine and get rid of the chills.

We have found the following formula to be the *best* to cure chronic chills:

℞. Sulph. Quininæ—(antidote).
Sulph. Ferri—(blood tonic).
Sulph. Zinci—(nerve tonic), aa grs. lxxij.
Pulv. Aloes (purgative), grs. xxx.

Mix and make into seventy-two pills—one pill three times a day. We believe the formula came from Dr. Wells, of Columbia, S. C., and has been in my own and my father's practice for thirty years. It may be made into a solution and given one teaspoonful three times a day.

Quinine may be administered in any stage of bilious fever after the action of a mercurial cathartic. No necessity to wait for an entire remission of the fever.

In bilious fever we use the following formula obtained from Dr. Oliver, of Montgomery, Alabama.

℞. Sulph. Quininæ, grs. xxxvj.
Sulph. Morphiæ, grs. j.
Tinc. Aconit, R. gtts. xij.

Mix, make twelve pills—one pill every two or three hours until all are taken. We make the pills as follows: Drop the tinct. aconite on the morphia, dissolve the morphia in the syrup, and add the quinine. This is necessary to prevent the improper mixture of the aconite or morphia. This will be found an exceedingly useful formula to the country practitioner as it may be left for use for several days and the directions easily understood.

Quinine in an *undissolved* state is very irritating to the stomach or rectum, owing no doubt to the obstinacy of its crystals—hence, it ought not to be given in water or dry in capsules—make into pills or a perfect solution.

Quinine should not be administered when the patient has a *red*, cracked, or glazed tongue. It is consequently a very poor remedy in peculiar forms of dyspepsia, and in the advanced stages of typhoid fever. For the same reason it should be used with caution in dysentery or diarrhœa.

Per contra, it may be used to prevent the febrile paroxysms of bronchitis, but is useless after tubercles are formed in phthisis. Its control of the fever may be taken as a fair diagnostic test of the existence of phthisis or bronchitis. Quinine produces in some patients a severe form of urticaria. Reasoning from this observation, we have made it our principal remedy in the treatment of measles. After gently opening the bowels, we give quinine in spts. nitr. dulce every three hours during the accession and advance of the eruption, and in whisky toddy during the decline.

Quinine still stands prominently ahead of any other remedy in the treatment of malarial fevers. Time will be lost in trying anything else. It will not make your patients permanently deaf or blind, and should be adhered to despite their prejudice or antipathy.

If these observations are found worthy to place in so valuable a journal as the Medical and Surgical Reporter, we may write again on other remedies.

W. L. Lipscomb, M. D.

Columbus, Miss., September, 1870.

News and Miscellany.

——Sir Dominic John Corrigan, an eminent physician of Dublin, has been elected member of the British Parliament for that city. Dr. Corrigan is an ex-president we believe, of the British Medical Association.

——According to Dr. Hager (*Pharm. Cent. Halle*) Radway's Ready Relief is an alcoholic solution of camphor, oleoresin of capsicum, and ammonia.

——The Paris *American Register* contains a notice signed by Dr. Thomas W. Evans, Chairman, and Edward A. Crane, Secretary, that "all persons interested in the humane work of providing help for the wounded should immediately send in their subscriptions in money or in kind. These subscriptions may be addressed to the American International Sanitary Committee, office, 15, Rue de la Paix, Paris."

DIED.

Day.—Dr. Horace B. Day, of Utica, N. Y., a highly respected physician, was accidently killed in the depot at Fitzwilliam, N. H., on the 24th of August, while stepping from the platform on to a car, he missed his footing and was thrown under the wheels.

Bedford.—On Monday, Sept. 5, Dr. Gunning S. Bedford, in the 64th year of his age.

Chapman.—On Friday, Sept. 2, Mrs. Rebecca B. Chapman, widow of Dr. Nathaniel Chapman, in the 88th year of her age.

Corson.—On the 2d inst., Margaret, wife of Dr. Thos. F. Corson.

Fair.—Aug. 16th, Dr. Samuel Fair, a physician of large practice in Columbia, S. C., for thirty years.

Peterson.—On Sunday, the 4th inst., at Long Branch, Hannah M., daughter of the late John Bouvier, and wife of Robert E. Peterson, M. D., in the 59th year of her age.